



Youth Alcohol Access, Consumption, and Consequences in Anchorage, Alaska: Identification of Indicators

Prepared for the
Volunteers of America CMCA Project

by

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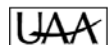
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This document presents recent information and trend analyses on a number of known indicators of youth access to alcohol, attitudes about alcohol consumption, alcohol consumption activities, and the consequences of youth alcohol consumption in Anchorage. Data for this report were collected from various reports on surveys completed by other researchers and governments, and in some cases state government departments provided unpublished analyses and raw data sets. Where possible, data are presented for Anchorage specifically. However, in some cases, data were available only at substate, state, or national levels. Unless otherwise stated, any differences described between groups or geographic areas in this report should not necessarily be considered to have statistical significance.



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Much of the information in this report was taken or modified from several reports and surveys such as the State (Alaska) Epidemiologic Profile on Substance Use, Abuse and Dependency; the Youth Risk Behavior Survey; the National Survey on Drug Use and Health; and the Monitoring the Future survey. We also referred to a number of online databases and statistics for this report, as well as to needs assessments that have been completed in Alaska. We would like to thank these parties for making their information available for this report.

Executive Summary

The purpose of this report is to provide a baseline description of the current state of the problem in order to assess change in the underage drinking problem associated with the implementation of strategies designed to reduce underage access to alcohol and consequences associated with underage drinking. The indicators in this report have been organized into categories of underage access to alcohol, social norms and perceptions associated with underage drinking, alcohol consumption patterns, and consequences of underage drinking. Consequences examined include school-related consequences of underage drinking, risky behavior associated with underage drinking, and legal consequences of underage drinking. Indicators describing alcohol abuse by people under 21 years of age requiring substance abuse treatment, health and safety consequences of underage drinking, and economic consequences of underage drinking have also been reported. Highlights from the report are summarized in this Executive Summary.

Youth Access to Alcohol

- Thirty-seven percent of students who consumed alcohol in the past 30 days reported obtaining the alcohol by giving money to someone to purchase it for them and 29% of students reported that someone gave them the alcohol they consumed.
- In Alaska, the percent of liquor licensees who passed compliance checks (did not sell alcohol to underage informants) ranged from 83% to 96% between 2004 and 2009.

Social Norms and Perceptions

- Just over one-third of youth in traditional and alternative schools in the Anchorage School District (ASD) and across Alaska report no or slight risk in consuming one or two drinks of alcohol nearly every day.
- Thirty-five percent of Alaskan youth ages 12 to 17 and 28% of Alaskans 18 to 25 years old report great risk in having five or more drinks of an alcoholic beverage (binge drinking) once or twice a week. Alaskans in both age groups (12 to 17 and 18 to 25) perceive great risk in weekly binge drinking at rates lower than the national average of 39% for 12 to 17 year olds and 33% for 18 to 25 year olds.

Consumption

- The percentage of Alaskans aged 18 to 20 who reported binge alcohol use increased from 16% in 2001 to 31% in 2005 and was higher than the national average of 20% in 2005.
- The percentage of Alaskans aged 18 to 20 who reported current (past month) alcohol use increased from 39% in 2001 to 48% in 2005 and was higher than the national average of 40% in 2005.
- Among students in ASD, every indicator of alcohol consumption for both males and females decreased from 1995 to 2009. Improved indicators of alcohol consumption included the following: ever consumed alcohol in lifetime, first consumed alcohol before age 13, consumed alcohol in the past 30 days, binge drinking in the past 30 days, and consumed alcohol on school property in the past 30 days. In every consumption indicator, excluding first alcohol consumption before age 13 by females, the percentage of male and female ASD

students reporting alcohol consumption was lower than the national average in 2009. In every indicator for females and most indicators for males, the percentage of ASD students reporting alcohol consumption was higher than the percentages reported by all Alaskan students.

Consequences

School-related consequences

- Since 2005, more students in Anchorage have been suspended and expelled for drug use and other behavior than for alcohol consumption.
- Among ASD students who opted to participate in the Prime for Life intervention program for first time alcohol and drug abuse offenders in 2009 and the first half of 2010, more students were caught with marijuana (67% in 2009 and 2010) than alcohol (18% in 2009 and 16% in 2010).

Risky behavior and underage drinking

- Between one-quarter and over one-third of ASD students reported being in a passenger in the car of a drinking driver within the past year in 2009.
- In 2009, 14% of female and 19% of male ASD students reported consuming alcohol before their most recent experience of sexual intercourse. These percentages were lower than the percentage of Alaska students and students nationwide who reported consuming alcohol before having sexual intercourse.

Underage drinking and driving: Traffic tickets, crashes, injuries, and fatalities

- Twelve percent of all alcohol-related driving while intoxicated tickets (DWI) given to drivers involved in crashes in Anchorage from 2000 to 2008 were given to youth who were 20 years old or younger.
- From 2000 to 2008, Anchorage youth ages 20 and younger who were drivers of the principle vehicles involved in crashes in which they were issued alcohol-related DWI tickets caused a total of 152 injuries.

Legal consequences of underage drinking

- From 2000 to 2008 there were 30,998 alcohol-related charges given to youth ages 20 and younger in Alaska. Of these charges, 93% were minor consuming charges.
- In Alaska in 2008 there were 3,254 minor consuming charges filed. This was a larger number of charges than any other year since 2002.
- In 2008, 267 charges were filed against Alaskan youth for operating vehicles after consuming alcohol. Charges for youth operating vehicles after consuming alcohol have increased each year since 2002 when 63 charges were filed.

Alcohol abuse requiring treatment

- In 2009 among people under 21 years of age there were 191 admissions to treatment for alcohol abuse only and 250 admissions to treatment for alcohol with a secondary substance of abuse in Alaska.

Health and safety consequences of underage drinking

- Alaska mothers with a maternal age of 15 to 19 had Fetal Alcohol Spectrum Disorder births at a higher rate than their representation among all live births.
- In Alaska from 2001 to 2005, there were 20 alcohol-induced deaths among Alaskans aged 0 to 24 years. Eleven of the alcohol-induced deaths among Alaskans 0 to 24 years involved Native males, five involved White males, three involved Alaska Native females, and one involved a Black female.

Economic consequences of underage drinking

- In 2007, the average cost of underage drinking per youth in the U.S. was \$2,280.00. Alaska had the highest cost of underage drinking per youth in 2007 with a cost per youth of \$4,393.00.
- In Alaska in 2007 it was estimated that \$217 million was spent on youth violence that resulted from underage drinking, over \$40 million on youth traffic crashes, and \$17 million on youth alcohol treatment.

Introduction

Underage drinking is a serious problem in Anchorage and Alaska statewide that has been documented using multiple indicators. The data provided in this report can be used as a baseline depicting the current state of the problem in order to assess change in the underage drinking problem associated with the implementation of strategies designed to reduce underage access to alcohol and consequences associated with underage drinking. Indicators available to depict different aspects of the underage drinking problem include access to alcohol, norms and perceptions surrounding alcohol use, alcohol consumption patterns, and consequences of underage drinking. Data on these indicators have been collected in a variety of ways from multiple sources (see References and the Appendix) and with different strengths and limitations. However, this report identifying indicators provides the first comprehensive compilation of existing indicators documenting the underage drinking problem that exists in Anchorage. While comprehensive, this report is admittedly not exhaustive of every possible indicator directly or indirectly associated with the underage drinking problem. In some cases, existing data may have been unintentionally excluded and can be added later. This report closes with a data gap analysis identifying additional indicators of the problem that are not currently available, or are not currently available for Anchorage youth.

Data documenting underage access to alcohol includes survey data indicating the method used by youth for obtaining the alcohol they consumed in the last 30 days. Survey data showing the percentage of youth in various Anchorage School District (ASD) school types (traditional, alternative, and McLaughlin Youth Center) who purchased the alcohol they consumed has also been provided. Next, this report summarizes data indicating retail access to alcohol. This data is collected by the Alcohol Beverage Control Board and covers compliance and non-compliance with laws prohibiting sales of alcohol to people under 21 years of age.

Access to and availability of alcohol contribute to the underage drinking problem, as does the existence of social norms and perceptions that underage drinking poses few risks. Social norms and perceptions are collected via survey and ask youth to rate the amount of risk associated with infrequent, regular, and binge drinking. This data is available for Anchorage and can be examined within various school types, genders, and races/ethnicities. Some of the data has been collected for several years and allows for the examination of trends over time. Data indicating social norms and perceptions associated with alcohol use, as well as youth perceptions of their parents' disapproval of their child's underage drinking, is available for youth in Anchorage and Alaska.

Indicators of alcohol consumption have also been collected by other surveys and are presented in this report. One indicator reports in gallons the amount of ethanol alcohol consumed by Alaskans aged 14 and older. Another indicator estimates the extent of binge drinking among Alaskans 12 and older and is broken down by region. While the regional data on gallons of alcohol consumption for Alaskans aged 14 and older is available over time, data regarding consumption patterns among Alaskans under 21 cannot be examined separately. However, self-reported rates of current alcohol use, binge drinking, alcohol dependency or abuse, and alcohol use needing treatment is available and can be examined for the under 21 age group. Survey data is also available for ASD students and documents the percentage of students reporting any

lifetime alcohol consumption, first consumption before the age of 13, alcohol consumption in the past 30 days, binge drinking in the past 30 days, and consumption of alcohol on school property in the past 30 days. This data has been broken down by gender as well as type of school (traditional, alternative, and McLaughlin Youth Center).

A variety of negative consequences associated directly and indirectly with underage alcohol consumption exists, and an extensive collection of indicators describing these consequences for youth in Alaska and/or Anchorage has been compiled in this report. School-related indicators include suspensions and expulsions associated with substance use in Anchorage and Alaska, and this data has been broken down by race/ethnicity. Data is also presented on students who opted into the Prime for Life program, including the type of school they attended and substance used. Survey data is available for ASD students on risky behavior engaged in by youth after consuming alcohol such as sexual intercourse and driving with a drinking driver. This data has been broken down by gender and multiple years of data have been provided. Several alcohol-related traffic indicators are also presented in this report, including the number of tickets issued to youth 20 years and younger involved in traffic crashes, with the data broken down by gender. In addition, the frequency of injuries caused by youth responsible for traffic crashes and who were issued DWI tickets as well as the number of fatal accidents involving youth and adults driving with blood alcohol levels over the legal limit are provided. Data on minor consuming charges for Alaska youth and trends in alcohol-related charges over time have been presented as well. The frequency of alcohol-related substance abuse treatment admissions for various age groups under the legal drinking age has also been summarized in this report. Other consequences associated with underage alcohol consumption available in Alaska and/or Anchorage and presented in this report include injuries and hospitalizations, FASD births among teen mothers, and financial costs related to underage drinking.

This comprehensive compilation of indicators documenting the underage drinking problem in Anchorage and Alaska is limited by differences between the different data sources. For instance, in some cases data were only available for a recent year while in other cases data for multiple years are available. However, various reporting organizations report data on different timelines hampering annual and trend comparisons. For instance, some data are compiled every other year while other data are compiled annually. Data sources also differ in the way they designate age groups. As an example, some data sources aggregated 12 to 17 year olds as a group while other data sources aggregated 12 to 20 year olds. Finally, some data sources allow for comparisons between Anchorage, Alaska, and the nation, whereas other data sources do not provide data at each level. While differences in data formatting and reporting make some comparisons among the different data sources difficult, taken as whole the various indicators present a comprehensive summary of the underage drinking problem in Anchorage and Alaska.

Youth Access to Alcohol

Within the Anchorage School District (ASD), 64% of youth reported that they had not consumed alcohol in the 30 days prior to being surveyed for the 2009 Youth Risk Behavior Survey (YRBS). Among youth who reported they had consumed alcohol, the majority (37%) obtained their alcohol by giving someone money to purchase it for them. Another 29% of youth responded that someone had given the alcohol to them, and 19% obtained it through other means. Eleven percent of youth “took it [their alcohol] from a store or family member.” Five percent of youth had purchased their alcohol themselves at a store, gas station, restaurant, bar or club, or at a public event (Table 1).

Table 1. Method of ASD Traditional School Students Obtaining Alcohol, 2009

Column percents

Way of accessing alcohol	All students	Students who drank
	%	%
Did not drink	63.9 %	-- %
Gave money to someone	12.8	36.7
Someone gave it to me	10.5	29.1
Other	6.7	19.2
Took it from store/family	3.6	10.5
Bought in store/gas station	1.3	2.4
Bought at restaurant/bar/club	1.0	1.8
Bought at public event	0.2	0.3

Source of data: Garcia, 2010

Weighted percent

The percentage of ASD youth who purchased their alcohol shows some variation between types of high schools and is higher in some Anchorage school types than the state average. In 2007 and 2009, 2% of youth in traditional high schools purchased alcohol themselves. In 2007, 4% of both alternative and McLaughlin Youth Center high school youth purchased alcohol themselves, and in 2009, 6% of alternative high school youth purchased alcohol themselves (insufficient data are available for youth in McLaughlin Youth Center high school in 2009). During 2007 and 2009, a smaller percentage of youth in traditional Anchorage high schools purchased their own alcohol than did the overall Alaska average of 2% in 2007 and 3% in 2009. Youth in ASD alternative and McLaughlin Youth Center schools were more likely to purchase their own alcohol than was the Alaska average.

Table 2. Youth Who Usually Purchased their Alcohol by School Type, 2007 and 2009

	Purchased alcohol
	%
2007	
ASD Traditional	1.5 %
ASD Alternative	3.7
ASD McLaughlin	3.8
Alaska	2.0
2009	
ASD Traditional	2.4 %
ASD Alternative	6.4
McLaughlin	--
Alaska	2.8

Sources of data: Kerosky, Chaney, and Kendziora, 2008; Kerosky and Turner, 2010; and State of Alaska Health and Social Services, 2007

Traditional school responses weighted by enrollments of sex within grade.

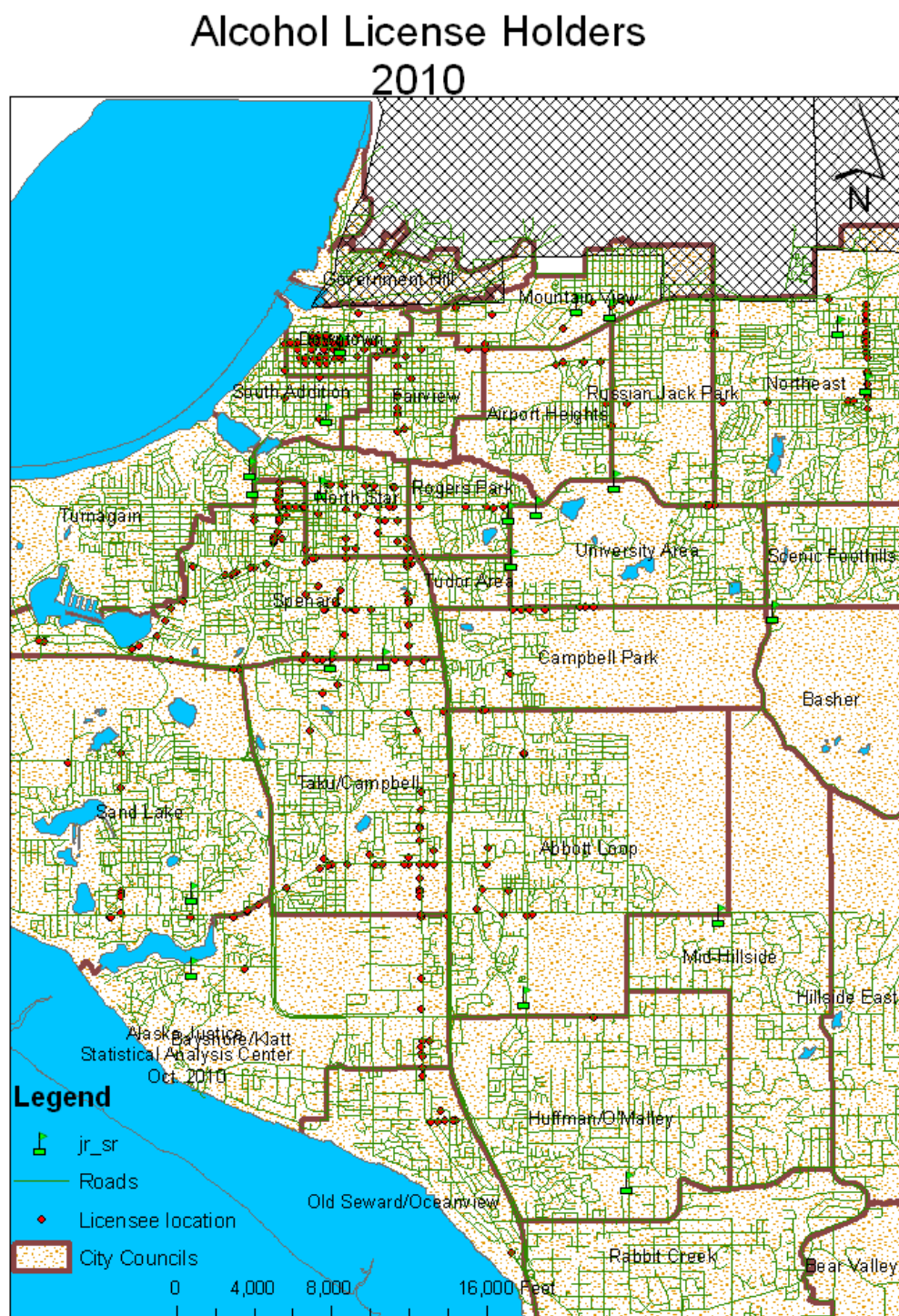
Data from the Alaska Beverage Control Board indicate that overall 96% of liquor licensees in Alaska passed compliance checks in 2004 and 87% passed in 2009. The percentage of licensees who passed the compliance checks decreased from 2004 to a low of 83% in 2008, and then increased again in 2009. The total percentage of Alaska regions meeting their compliance rate targets was 29% in 2005 and 50% in 2009. However, the percentage of regions meeting their target has decreased in 2008 and 2009 from their high of 86% in 2007 (Table 3). A map displaying alcohol license holders in Anchorage and local schools is provided in Figure 1.

Table 3. Licensee Compliance, 2004 to 2009

Fiscal Year	Compliance among licensees	Regions meeting target
	%	%
2009	87.0 %	50.0 %
2008	83.0	50.0
2007	84.4	86.0
2006	87.6	29.0
2005	95.0	29.0
2004	96.3	--

Source of data: State of Alaska Alcoholic Beverage Control Board, 2010

Figure 1. Map of Anchorage Alcohol License Holder Locations and Local Schools



Social Norms and Perceptions

In 2009, youth in traditional and alternative schools within the Anchorage School District (ASD) reported their perceptions of risk in consuming alcohol daily at rates equal to the state average. Just over one third of students (35%) in traditional and alternative ASD high schools, as well as across all Alaska high schools, reported no or slight risk in consuming one or two drinks of alcohol nearly every day. A higher percentage of youth in McLaughlin Youth Center (43%) reported no or a slight risk of consuming one or two drinks of alcohol nearly every day. Publicly available data summarizing student perceptions cannot easily be compared from 2007 to 2009 because in 2009 the categories of slight and no risk were collapsed into a single response category, whereas reports of 2007 data present no risk as a stand-alone response category (Table 4).

Table 4. ASD Youth who Perceive No or Slight Risk in Consuming One or Two Drinks of Alcohol Nearly Every Day by Type of School

Risk	Traditional %	Alternative %	McLaughlin %	Alaska %
Slight/no risk 2009	34.7 %	34.5 %	43.4 %	34.7 %
No risk 2007	13.9	16.0	11.8	--

Sources of data: Kerosky, Chaney, and Kendziora, 2008; and Kerosky and Turner, 2010

Traditional school responses rated for combined enrollment of sex within grade.

The 2009 Alaska YRBS indicates that female youth in both traditional and alternative schools appear less likely to report perceiving no risk of harm in consuming alcohol nearly every day than male youth. Seven percent of female youth in traditional schools and 6% of female youth in alternative schools reported perceiving no risk of harm in consuming one or two drinks of alcohol nearly every day, versus 14% and 17% of male youth, respectively. Alaska Native youth in traditional schools (13%) were more likely to report no risk of harm in consuming alcohol nearly every day than were other youth in traditional schools. White youth in alternative schools (13%) were more likely to report no risk of harm than White youth in traditional schools (9%). Overall, an equal percentage of youth in traditional and alternative schools saw no risk of harm in consuming alcohol nearly every day (11% and 12% respectively) (Table 5).

Table 5. Alaska Youth Who Perceive No Risk of Self-Harm if They Consume One or Two Drinks of an Alcoholic Beverage Nearly Every Day, 2009

Column percents

	Traditional School	Alternative School
	%	%
Student Gender		
Female	7.3 %	6.4 %
Male	14.4	17.1
Student Race		
Alaska Native	13.3 %	9.3 %
Black (Non-Hispanic)	--	--
Hispanic/Latino	11.7	--
White (Non-Hispanic)	9.3	12.6
Total Overall	11.0	11.9

Source of data: *State of Alaska Health and Social Services, 2009*

Missing data indicate less than 100 youth in the subgroup.

Results from the 2005-2006 National Survey on Drug Use and Health (NSDUH) present the percentage of youth ages 12 to 17 in both Alaska and the nation overall who perceive great risk in having five or more drinks of an alcoholic beverage once or twice a week. Thirty-five percent of Alaskan youth ages 12 to 17 perceived great risk in this behavior, versus 28% of Alaskans ages 18 to 25 years. In both age groups, Alaskans perceived great risk at rates lower than the national average. Thirty-five percent of Alaskans 12 to 17 years old, versus 39% of U.S. 12 to 17 year olds, reported great risk in having five or more alcohol drinks weekly, while 28% of Alaskan 18 to 25 year olds, versus 33% of U.S. young adults in that age group, reported great risk in consuming five or more alcohol drinks in one week (Table 6).

Table 6. Estimated Annual Average of Alaska Youth who Perceive Great Risk in Having Five or More Drinks of an Alcoholic Beverage Once or Twice a Week, 2005 and 2006

Row Percents

Region	12 to 17 years	18 to 25 Years
	%	%
Alaska	34.9 %	27.9 %
Total U.S.	38.9	32.7

Source of data: *Substance Abuse and
Mental Health Services Administration, 2006*

Estimates based on survey-weighted hierarchical Bayes estimation approach

The NSDUH further indicates that there may be slight differences in Alaskans' perceptions of great risk in consuming five or more drinks of alcohol weekly, depending on the region in which they live. Alaskans living in the Rural region were most likely of all Alaskans to perceive great risk in having five or more drinks of an alcoholic beverage once or twice a week. The survey shows that between the years 1991 to 2001 and 2002 to 2004, 46% and 43% respectively perceive great risk (Table 7). Perceptions of risk in binge drinking reported by Alaskans in the Urban region were roughly in the middle relative to other regions of Alaska. Overall, Alaskans in each of the NSDUH regions perceived great risk in having five or more drinks of alcohol weekly at rates similar to the national average in both time periods (Tables 3 and 4). For both the national average and each region of Alaska, a smaller percentage of persons ages 12 and older reported great risk in 2002 to 2004 than in the previous period, 1999 to 2001).

Table 7. Estimated Annual Average of Alaskans Aged 12 and Older Who Perceive Great Risk in Having Five or More Drinks of an Alcoholic Beverage Once or Twice a Week by Region, 1999 to 2004

Column Percents

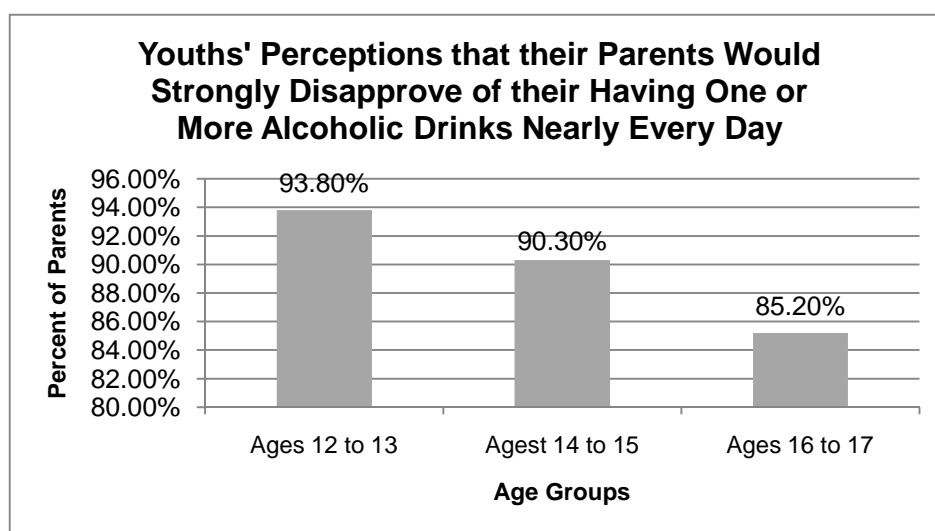
Region	Great Risk in Binge Drinking	
	1999 to 2001	2002 to 2004
	%	%
Rural	46.3 %	43.0 %
Urban	45.1	41.7
Southeast	44.0	39.8
Gulf Coast	42.5	37.5
Alaska Average	44.8	41.1
National Average	46.0	41.7

Sources of data: *Substance Abuse and Mental Health Services Administration, 2008a and January 15, 2009*

Urban: Anchorage, Fairbanks North Star, Matanuska-Susitna, Southeast Fairbanks
 Gulf Coast: Kenai Peninsula, Kodiak Island, Valdez Cordova
 Rural: Alutians East and West, Bethel, Bristol Bay, Denali, Dillingham, Lake and Peninsula, Nome, North Slope, Northwest Arctic, Wade Hampton, Yukon Koyukuk
 Southeast: Haines, Juneau, Ketchikan Gateway, Prince of Wales-Outer Ketchikan, Sitka, Skagway-Hoonah-Angoon, Wrangell-Petersburg, Yakutat

The percentage of youth believing their parents would strongly disapprove of nearly daily alcohol consumption appears to decrease as age increases. Nationally, 94% of American youth (which includes Alaskan youth) ages 12 to 13 believe that their parents would strongly disapprove of them consuming one or more drinks of an alcoholic beverage nearly every day. Ninety percent of youth ages 14 to 15 believe their parents would strongly disapprove, as do 85% of youth ages 16 to 17 (Figure 2).

Figure 2. Youth Who Perceive that their Parents Would Strongly Disapprove of Consuming One or More Drinks of an Alcoholic Beverage Nearly Every Day, 2007



Source of data: Substance Abuse and Mental Health Services Administration, May 2009

Although Alaska does not participate in the Monitoring the Future surveys, an analysis of the perceptions of youth that are reported at a national level may help to provide comparisons to information collected in other Alaska surveys. On average, the percentage of American youth in each grade level who perceives great risk of self-harm from alcohol consumption seems to increase with the amount of alcohol consumption. Youth in all grade levels appeared slightly more likely to perceive great risk of self-harm for all amounts of alcohol consumption in 2008 than they were in 2000. In 2008, youth in grade 12 were less likely than youth in lower grades to report great risk of self-harm in trying one or more drinks, taking one or two drinks nearly every day, or having five or more drinks once or twice each weekend (10%, 24% and 46%, respectively). There was a significant decrease of 1.3% in eighth graders who perceived great risk in trying one or more drinks from 2007 to 2008. From 2007 to 2008, there were significant increases of 1.7% and 2.5% in ninth graders who perceived great risk of taking one or two drinks nearly every day having five or more drinks once or twice each weekend respectively (Table 8).

Table 8. U.S. Youth Who Perceive Great Risk of Self-Harm if They Consume Alcohol, 2000 to 2008

	Year									Change 2007 to 2008
	2000	2001	2002	2003	2004	2005	2006	2007	2008	
	%	%	%	%	%	%	%	%	%	
Grade 8										
Try one or more drinks (beer, wine, liquor)	11.9 %	12.2 %	12.5 %	12.6 %	13.7 %	13.9 %	14.2 %	14.9 %	13.5 %	-1.3 % *
Take one or two drinks nearly every day	30.4	30.0	29.6	29.9	31.0	31.4	31.3	32.6	31.5	-1.2
Have five or more drinks once or twice each weekend	55.9	56.1	56.4	56.5	56.9	57.2	56.4	57.9	57.0	-0.9
Grade 10										
Try one or more drinks (beer, wine, liquor)	9.6 %	9.8 %	11.5 %	11.5 %	10.8 %	11.5 %	11.1 %	11.6 %	12.6 %	+ 0.9 %
every day	32.3	31.5	31.0	30.9	31.3	32.6	31.7	33.3	35.0	+ 1.7 *
Have five or more drinks once or twice each weekend	51.0	50.7	51.7	51.6	51.7	53.3	52.4	54.1	56.6	+ 2.5 **
Grade 12										
Try one or more drinks (beer, wine, liquor)	6.4 %	8.7 %	7.6 %	8.4 %	8.6 %	8.5 %	9.3 %	10.5 %	10.0 %	-0.5 %
Take one or two drinks nearly every day	21.7	23.4	21.0	20.1	23.0	23.7	25.3	25.1	24.2	-0.9
Take four or five drinks nearly every day	59.9	60.7	58.8	57.8	59.2	61.8	63.4	61.8	60.8	-1.0
Have five or more drinks once or twice each weekend	42.7	43.6	42.2	43.5	43.6	45.0	47.6	45.8	46.3	+ 0.6

Source of data: Johnston, O'Malley, Bachman, & Schulenberg, 2009

* significance of .05 between last two classes in the grade

** significance of .01 between last two classes in the grade

The Monitoring the Future survey has also asked American youth (excluding Alaska) about their approval of other people's alcohol consumption. The percentage of youth in grades eight and 10 who disapproved of any consumption appears to have been higher in 2000 than in 2008. Although there were slight decreases from 2007 to 2008 in the percentage of grade eight youth who disapproved of others consuming alcohol, these changes were not found to be significant. Significant increases, however, were found among tenth graders who disapproved of others trying one or more drinks and having five or more drinks once or twice each weekend (significant increases of +2.3% and +3.1%, respectively). Generally, a higher percentage of eighth grade youth than tenth grade youth reported disapproval of other people's alcohol consumption in 2008 (Table 9).

Table 9. Youth in Grades 8 and 10 Who Disapprove or Strongly Disapprove of People Who Consume Alcohol, 2000 to 2008

	Year									Change 2007 to 2008
	2000	2001	2002	2003	2004	2005	2006	2007	2008	
	%	%	%	%	%	%	%	%	%	
Grade 8										
Try one or more drinks (beer, wine, liquor)	48.7 %	49.8 %	51.1 %	49.7 %	51.1 %	51.2 %	51.3 %	54.0 %	52.5 %	-1.6 %
Take one or two drinks nearly every day	77.8	77.4	78.3	77.1	78.6	78.7	78.7	80.4	79.2	-1.2
Have five or more drinks once or twice each weekend	81.2	81.6	81.9	81.9	82.3	82.9	82.0	83.8	83.2	-0.6
Grade 10										
Try one or more drinks (beer, wine, liquor)	33.4 %	34.7 %	37.7 %	36.8 %	37.6 %	38.5 %	37.8 %	39.5 %	41.8 %	+ 2.3 % *
Take one or two drinks nearly every day	73.8	73.8	74.9	74.2	75.1	76.9	76.4	77.1	79.1	+ 2.0
Have five or more drinks once or twice each weekend	68.2	69.2	71.5	71.6	71.8	73.7	72.9	74.1	77.2	+ 3.1 **

Source of data: Johnston, O'Malley, Bachman, & Schulenberg, 2009

* significance of .05 between last two classes in the grade

** significance of .01 between last two classes in the grade

The Monitoring the Future survey also asks grade 12 youth to describe their disapproval of people age 18 and older consuming alcohol. Overall, disapproval among this group also appears to have increased for each level of consumption from 2000 to 2008. In addition, the percentage of grade 12 youth disapproving of others consuming alcohol seems to have increased with the amount of consumption. In 2008, 30% of grade 12 youth disapproved of people age 18 or older trying one or more drinks, 69% disapproved of those who have five or more drinks once or twice each weekend, 75% disapproved of others who take one or two drinks nearly every day, and 90% disapproved of others taking four or five drinks nearly every day (Table 10).

Table 10. Youth in Grade 12 Who Disapprove or Strongly Disapprove of People Age 18 or Older Who Consume Alcohol, 2000 to 2008

Consumption disapproval	Year									2007 to 2008 change
	2000 %	2001 %	2002 %	2003 %	2004 %	2005 %	2006 %	2007 %	2008 %	
Try one or more drinks (beer, wine, liquor)	25.2 %	26.6 %	26.3 %	27.2 %	26.0 %	26.4 %	29.0 %	31.0 %	29.8 %	-1.2 %
Take one or two drinks nearly every day	70.0	69.2	69.1	68.9	69.5	70.8	72.8	73.3	74.5	+ 1.2
Take four or five drinks nearly every day	88.4	86.4	87.5	86.3	87.8	89.4	90.6	90.5	89.8	-0.7
Have five or more drinks once or twice each weekend	65.2	62.9	64.7	64.2	65.7	66.5	68.5	68.8	68.9	+ 0.2

Source of data: Johnston, O'Malley, Bachman, and Schulenberg, 2009

Consumption

Trend data for the years 2000 to 2007 indicate that per capita consumption of beer, spirits and wine among Alaskans age 14 years and older has remained relatively unchanged. In 2007, Alaskans consumed 1.3 gallons of beer per capita, 1.1 gallons of spirits, and 0.5 gallons of wine. Alaskans' alcohol consumption rate was comparable to the national averages for beer and wine, but was higher than the national average for consumption of spirits in 2007. Alaskans consumed 1.1 gallons of spirits per capita versus 0.7 gallons per capita for the U.S average in 2007 (Table 11).

Table 11. Trends in Per Capita Ethanol Consumption for Alaskans Age 14 Years and Older, 2000 to 2007 (Gallons)

Beverage Type	Year								
	2000	2001	2002	2003	2004	2005	2006	2007	U.S. 2007
Beer	1.4	1.4 %	1.4	1.3 %	1.3	1.2	1.2	1.3	1.2
Spirits	0.9	1.0	1.1	0.8	1.0	1.0	1.0	1.1	0.7
Wine	0.4	0.4	0.4	0.4	0.5	0.4	0.5	0.5	0.4

Source of data: National Institutes of Health, 2009

On average, Alaskans aged 12 and older reported any alcohol use and binge alcohol use at a lower percentage than the national average in both the 1999 to 2001 and 2002 to 2004 reporting years, according to NSDUH data. Alaskans in the Urban region (including Anchorage) were more likely to report any alcohol use in 1999 to 2001 than the national average (54% versus 47%), but this difference decreased in 2002 to 2004 to 52% for Urban Alaskans versus 50% for the national average. In addition, Urban Alaskans were more likely to report any alcohol use than were Alaskans in other regions in 1999 to 2001. Alaskans in the Southeast region were the most likely to report any alcohol use in 2002 to 2004 (53%). Twenty-two percent of Urban Alaskans reported binge alcohol use in 1999 to 2001, as did 23% of Urban Alaskans in 2002 to 2004. Alaskans in the Gulf Coast region were most likely to report binge alcohol use in 2002 to 2004 (24%). The amount of both any alcohol use and binge alcohol use for Urban Alaskans showed very little change between 1991 and 2004, as did the state and national averages (Table 12).

Table 12. Estimated Annual Average of Alaskans Aged 12 and Older Consuming Alcohol in the Past Month by Region, 1999-2004

Column percents

Region	1999 to 2001		2002 to 2004	
	Any	Binge Alcohol	Any	Binge Alcohol
	Alcohol Use	Use	Alcohol Use	Use
	%	%	%	%
Urban	53.9 %	21.5 %	51.5 %	22.6 %
Gulf Coast	47.8	20.0	51.5	23.9
Rural	36.3	19.9	34.2	19.8
Southeast	51.2	19.6	52.6	21.7
Alaska Average	50.9	20.9	49.8	22.3
National Average	47.3	20.7	50.4	22.8

Sources of data: *Substance Abuse and Mental Health Services Administration, 2008a and January 15, 2009.*

Urban: Anchorage, Fairbanks North Star, Matanuska-Susitna, Southeast Fairbanks
 Gulf Coast: Kenai Peninsula, Kodiak Island, Valdez Cordova
 Rural: Alutians East and West, Bethel, Bristol Bay, Denali, Dillingham, Lake and Peninsula, Nome, North Slope, Northwest Arctic, Wade Hampton, Yukon Koyukuk
 Southeast: Haines, Juneau, Ketchikan Gateway, Prince of Wales-Outer Ketchikan, Sitka, Skagway-Hoonah-Angoon, Wrangell-Petersburg, Yakutat

From 2002 to 2004, the percentage of Alaskans ages 12 to 20 reporting any alcohol use ranged from 19% in the Rural region to 28% in the Urban region. The percentage of 12 to 20-year-olds reporting any alcohol use in the Urban region (28%) appears to be higher than the State average of 26%, but lower than the national average (29%). Reported binge alcohol use from 2002 to 2004 ranged from 16% in the Rural region to 21% in the Gulf Coast region. The percentage of 12 to 20-year-olds in the Gulf Coast region reporting binge alcohol use was above both the state and national averages of 19%. Overall, Alaskans aged 12 to 20 years reported lower percentages of any alcohol use and comparable percentages of binge alcohol use to the nation as a whole from 2002 to 2004 (Table 13).

Table 13. Estimated Annual Average of Alaska Youth Aged 12 to 20 Consuming Alcohol in the Past Month by Region, 2002 to 2004

Column percents

Region	2002 to 2004	
	Any	Binge Alcohol
	Alcohol Use	Use
	%	%
Urban	27.7 %	18.9 %
Gulf Coast	26.4	21.3
Rural	19.2	15.5
Southeast	26.6	19.1
Alaska	26.4	18.8
National Average	28.7	19.3

Source of data: *Substance Abuse and Mental Health Services Administration, 2008b*

Urban: Anchorage, Fairbanks North Star, Matanuska-Susitna, Southeast Fairbanks
 Gulf Coast: Kenai Peninsula, Kodiak Island, Valdez Cordova
 Rural: Alutians East and West, Bethel, Bristol Bay, Denali, Dillingham, Lake and Peninsula, Nome, North Slope, Northwest Arctic, Wade Hampton, Yukon Koyukuk
 Southeast: Haines, Juneau, Ketchikan Gateway, Prince of Wales-Outer Ketchikan, Sitka, Skagway-Hoonah-Angoon, Wrangell-Petersburg, Yakutat

According to the National Survey on Drug Use and Health (NSDUH) from 2004 to 2005, as cited by Hull-Jilly and Casto (2009), 16% of Alaska youth ages 12 to 17 reported current alcohol use, compared to the U.S. average of 17% for the same age group. In 2005, 10% of youth ages 12 to 17 reported binge alcohol use, and 6% reported alcohol dependency/abuse, as well as needing treatment in the past year. In the U.S. in 2005, the average youth aged 12 to 17 reported binge alcohol use, alcohol dependency/abuse, and needing treatment in the past year, at levels equal to those of Alaska youth of the same age in the same year. The percentage of youth in Alaska reporting current and binge alcohol use, alcohol dependency, and needing treatment in the past year was stable between the 2003 to 2004 and 2004 to 2005 reporting years.

Alaskans aged 18 to 25 reported lower rates of alcohol consumption behaviors compared to the U.S. figures for this age group. Among Alaskans aged 18 to 25, 57% reported current alcohol use in the 2004 to 2005 reporting year, 37% reported binge alcohol use, 16% reported alcohol dependency/abuse, and 16% reported needing treatment in the past year. In the U.S., 61% of 18 to 25-year-olds reported current alcohol use in the 2004 to 2005 reporting year, 42% reported binge alcohol use, 18% reported alcohol dependency/abuse, and 17% reported needing treatment in the past year. Similar to the 12 to 17-year-old Alaskans, the percentages of Alaskans aged 18 to 25 reporting current and binge alcohol use, alcohol dependency, and requiring treatment in the past year remained stable from reporting years 2003 to 2004 and 2004 to 2005.

In 2005, 51% of Alaskans of all ages reported current alcohol use, 22% reported binge alcohol use, 8% reported alcohol dependency, and 7% reported needing treatment for alcohol use

in the past year. These levels were about equal to those reported by the average U.S. citizen (all ages), and were relatively equal to those reported by average Alaskans of all ages in the year 2003-2004 (Table 14).

Table 14. Trends in Reported Alcohol Use, by Age Group, Alaska

	2003 to 2004	2004 to 2005	U.S. 2004 to 2005
	%	%	%
Ages 12 to 17 alcohol use			
Alcohol dependency/abuse	5.7 %	6.0 %	5.8 %
Binge alcohol use	11.4	9.6	10.5
Current alcohol use	16.0	14.7	17.1
Needing treatment in past year	5.2	5.7	5.5
Ages 18 to 25 alcohol use			
Alcohol dependency/abuse	16.3 %	16.1 %	17.5 %
Binge alcohol use	39.1	37.3	41.5
Current alcohol use	57.8	57.4	60.7
Needing treatment in past year	15.8	15.7	16.9
All ages			
Alcohol dependency/abuse	7.4 %	7.5 %	7.7 %
Binge alcohol use	21.5	21.8	22.7
Current alcohol use	49.3	50.6	51.1
Needing treatment in past year	7.3	7.2	7.3

Source of data: *Hull-Jilly and Casto, 2009*

Forty-eight percent of Alaska youth ages 18 to 20 reported current alcohol use on the Behavioral Risk Factor Surveillance System (BRFSS) survey of 2005, compared to 39% in 2001. Binge alcohol use follows a similar trend, with 31% of 18 to 20 year olds reporting binge alcohol use in 2005 versus 16% in 2001. In 2005 the national average for current alcohol use among 18 to 20 year olds was 40% and binge drinking was 20%. Heavy alcohol use reported by Alaskans ages 18 to 20 remained unchanged in 2005 compared to 2001 (6%), although it had reached a high of 9% in 2003 and a low of 2% in 2004. According to the 2005 BRFSS, heavy alcohol use reported by Alaskans ages 18 to 20 was equal to the national heavy alcohol use average of 6% (Table 15).

Table 15. Trends in Percentage of Alaska Youth Ages 18 to 20 Consuming Alcohol, 2001-2005

Consumption behavior	Year					U.S. 2005
	2001	2002	2003	2004	2005	
	%	%	%	%	%	%
Binge alcohol use	15.6 %	25.8 %	22.1 %	9.4 %	31.2 %	19.5 %
Current alcohol use	38.5	39.9	45.0	34.3	48.1	40.2
Heavy alcohol use	6.0	4.8	9.3	1.5	6.3	6.1

Source of data: Hull-Jilly and Casto, 2009

Female youth in Anchorage School District (ASD) traditional schools appear to have lower alcohol consumption in 2009 versus 1995, as indicated by the ASD 2009 Youth Risk Behavior Survey (YRBS). The YRBS asks students to report on how many days they have consumed at least one drink of alcohol as a measure of any lifetime alcohol consumption. Seventy percent of female youth in ASD traditional schools reported any lifetime alcohol consumption, versus 81% in 1995. Similarly, the percentage of female youth who reported they first consumed alcohol before age 13 was 21% in 2009 versus 36% in 1995, and past 30 day use was reported by 36% of females in 2009 and 45% in 1995. Past 30 days consumption of five or more drinks in a row was 22% in 2009 compared to 26% in 1995. Female youth's past 30 days alcohol use on school grounds remained unchanged at 4% in both 1995 and 2009. A larger percentage of female youth in ASD traditional schools reported various alcohol consumption behaviors than the Alaska average in 2009. In 2009, 21% of female youth in ASD traditional schools reported that they first consumed alcohol before the age of 13 versus 18% for the U.S. average.

Male youth in ASD traditional schools also appear to have reported lower levels of alcohol consumption in 2009 than in 1995, according to the ASD 2009 YRBS. In 2009, 64% of male youth in ASD traditional schools reported any lifetime alcohol consumption, compared to 80% in 1995, and 19% reported they first consumed alcohol before the age of 13 versus 42% in 1995. Past 30 day consumption among ASD traditional school males was 34% in 2009 versus 49% in 1995, 23% reported consuming five or more drinks in a couple hours in the past 30 days in 2009 versus 37% in 1995, and 4% reported consuming alcohol on school property in the past 30 days, compared to 8% in 1995. Male youth in ASD traditional schools appear to have reported similar levels of alcohol consumption behaviors as male youth in Alaska generally. Both ASD traditional school males and Alaska male youth reported lower rates of all alcohol consumption behaviors than the U.S. average in 2009, according to the ASD and National YRBS surveys of 2009 (Table 16).

Table 16. Trends in Alcohol Use Among Youth in ASD Traditional Schools by Gender, 1995 to 2009

	ASD 1995	ASD 2005	ASD 2007	ASD 2009	Alaska 2009	U.S. 2009
	%	%	%	%	%	%
Female youth alcohol use						
Lifetime alcohol consumption	80.8 %	78.6 %	76.0 %	69.6 %	67.8 %	74.2 %
First consumed alcohol before age 13	35.6	23.7	18.1	21.4	16.0	18.1
Alcohol consumption in past 30 days	45.2	44.1	38.0	35.5	32.9	42.9
Five or more drinks in couple hours in past 30 days	25.9	28.6	23.8	21.9	19.9	23.4
Consumed alcohol on school property, past 30 days	4.4	4.4	5.5	3.6	2.3	3.6
Male youth alcohol use						
Lifetime alcohol consumption	79.8 %	72.9 %	73.6 %	63.5 %	65.4 %	70.8 %
First consumed alcohol before age 13	41.8	25.0	23.0	19.3	17.6	23.7
Alcohol consumption in past 30 days	49.1	38.5	43.5	34.3	33.5	40.8
Five or more drinks in couple hours in past 30 days	36.8	27.1	28.5	23.3	23.3	25.0
Consumed alcohol on school property, past 30 days	8.1	8.5	8.4	3.5	3.3	5.3

Sources of data: Kerosky and Turner, 2010; Centers for Disease Control, 2010

Traditional school responses weighted by enrollments of sex within grade

A comparison of the 2007 and 2009 ASD YRBS surveys indicates that the overall consumption of alcohol for youth in each type of school in the ASD appears to be lower in 2009 than in 2007. A lower percentage of youth in traditional ASD schools reported consuming any amount alcohol, or consuming alcohol on school property, in 2009 than in 2007. However, a similar percentage of ASD traditional school students reported having their first drink of alcohol before the age of 13 on the 2007 and 2009 surveys (21% and 20%, respectively). Among alternative school youth, 24% reported having their first drink of alcohol before the age of 13 in 2009, versus 31% in 2007. Ninety percent of alternative school youth reported lifetime consumption of alcohol in 2009, compared to 84% in 2007. In 2009, 4% of alternative school youth reported having consumed alcohol on school property in the past 30 days versus 7% in 2007. Equal percentages of alternative school youth reported in 2007 and in 2009 having one or more drinks (54%) and nearly equal percentages reported having five or more drinks in a row within a couple hours in the past 30 days (37% in 2007 and 38% in 2009). In 2009, 56% of McLaughlin Youth Center school youth reported having one or more drinks in the past 30 days, while 76% had reported this in 2007. In addition, 48% of McLaughlin youth reported consuming five or more drinks in a row within a couple of hours in 2009 versus 64% in 2007. Forty-seven percent of McLaughlin youth reported having their first drink before the age of 13 in 2009, compared to 41% in 2007. A relatively equal percentage of McLaughlin school youth reported consuming alcohol on school property in the past 30 days in 2009 as in 2007 (15% versus 16%, respectively) (Table 17).

Table 17. Alcohol Consumption Among Youth in ASD by Type of High School, 2007 and 2009

Consumption Behavior	ASD 2007			ASD 2009		
	Traditional	Alternative	McLaughlin	Traditional	Alternative	McLaughlin
	High Schools	High Schools	High School	High Schools	High Schools	High School
	%	%	%	%	%	%
First drink before age 13	20.6 %	30.8 %	41.3 %	20.3 %	24.2 %	47.0 %
One drink or more in past 30 days	40.8	54.0	76.4	34.9	54.4	56.4
Five or more drinks in a row within a couple hours in past 30 days	26.2	37.3	63.8	22.6	38.4	47.8
Lifetime consumption	74.8	83.7	92.6	66.5	90.3	82.2
Consumption on school property	7.0	7.0	15.6	3.6	3.8	15.0

Sources of data: Kerosky, Chaney, and Kendzoria, 2008, Kerosky and Turner 2010

Traditional school responses weighted by combined enrollments of sex within grade

Consequences

In the Anchorage School District (ASD), 1% of suspensions and 1% of expulsions between 2005 and 2009 were each related to consumption of alcohol and tobacco, and 3% were related to drug use. Inappropriate behavior was the most common reason for a suspension or expulsion in the ASD from 2005 to 2009 (34% of cases), followed by fighting and assault (13%), and harassment and extortion (8%).

In all other Alaska districts combined, alcohol consumption was the reason for suspension or expulsion in 1% of cases from 2005 to 2009, drug use was the reason in 3% of cases, and tobacco use in 4% of cases. Inappropriate behavior was also the most common reason for a suspension or expulsion in all other school districts from 2005 to 2009 (47%), followed by fighting and assault (15%), and harassment and extortion (8%) (Table 18).

School-Related Consequences

Table 18. Reason for Suspension or Expulsion in Alaska Schools, 2005 to 2009

Column percents

Reason	Anchorage		All Other Districts		Alaska
	N	%	N	%	Total
Alcohol	351	0.9 %	645	1.1 %	996
Drug use	1,142	2.9	1,531	2.5	2,676
Fighting/assault	5,298	13.4	9,044	15.0	14,356
Inapp. behavior	13,401	34.0	28,090	46.7	41,498
Truancy	4	0.0	743	1.2	747
Arson/vandalism	446	1.1	1,012	1.7	1,464
Harass./extortion	2,967	7.5	5,051	8.4	8,022
Tobacco	358	0.9	2,402	4.0	2,767
Theft	849	2.2	1,199	2.0	2,051
Other	14,576	37.0	10,420	17.3	24,999
Total	39,392		60,137		99,576

Source of Data: Alaska Department of Education and Early Development, 2010

From 2005 to 2009, a total of 39,392 in-school suspensions, suspensions, and expulsions were recorded for schools in the Municipality of Anchorage, 1,851 (5%) of which were related to substance use (Table 19, results not shown). Of the 1,851 suspensions and expulsions that related to substance use, 19% were related to alcohol consumption, 62% to drug use, and 19% to tobacco (results not shown). Among cases that related to alcohol, 93% resulted in suspension and 7% in expulsion. There were no in-school suspensions resulting from the consumption of alcohol. Eighty-four percent of the cases relating to drug use resulted in suspension and 17% in expulsion. As with alcohol consumption, no in-school suspensions resulted from drug use. Nineteen percent of tobacco use cases resulted in in-school suspension, 79% in suspension, and 2% in expulsion.

Table 19. Type of Suspension or Expulsion in Municipality of Anchorage Resulting from Substance Use, 2005 to 2009

Column percents

Suspension	Alcohol		Drug Use		Tobacco		Other	
	N	%	N	%	N	%	N	%
In-school suspension	0	0.0 %	0	0.0 %	69	19.3 %	16,214	43.2 %
Suspension	325	92.6	954	83.5	283	79.1	20,945	55.8
Expulsion	26	7.4	188	16.5	6	1.7	382	1.0
Total	351		1,142		358		37,541	

Source of data: Alaska Department of Education and Early Development, 2010

Alcohol use among youth may have the potential to impact individual youth's school activities. According to data obtained from the Alaska Department of Education and Early Development (2010), 45% of suspensions and expulsions in the Anchorage School District (ASD) in the 2008 to 2009 academic year were the result of inappropriate behavior (Table 20). Previously, inappropriate behavior was the reason for 30% of suspensions and expulsions in the 2007 to 2008 school year, 31% in 2006-2007, and 32% in the 2005 to 2006 school year in the ASD. Fighting and assault accounted for 13% of suspensions and expulsions in the ASD in the 2008 to 2009 school year, 12% in 2007 to 2008, 13% in 2006 to 2007, and 15% in the 2005 to 2006 school year.

In the 2008 to 2009 school year, 5% of suspensions and expulsions in the ASD were for harassment and extortion. Harassment and extortion accounted for 8% of ASD suspensions and expulsions in 2007 to 2008 and 2006 to 2007 school years, and 9% in the 2005 to 2006 school year. Alcohol consumption, drug use, and tobacco use combined were the reason provided for 5% of suspensions and expulsions in the ASD 2008 to 2009 school year, 4% in 2007 to 2008, and 5% in each of the 2006 to 2007, and 2005 to 2006 school years.

In all Alaska school districts other than ASD, 45% of suspensions and expulsions in the 2008 to 2009 school year were for inappropriate behavior. Inappropriate behavior was also the

reason for 41% of suspensions and expulsions in 2007 to 2008, 42% of suspensions and expulsions in 2006 to 2007, and 39% in the 2005 to 2006 school years. Twelve percent of the suspensions and expulsions in school districts other than the ASD were attributable to fighting and assault in the 2008 to 2009 school year, as were 14% of suspensions and expulsions in 2007 to 2008, and 16% in each of the 2006 to 2007 and 2005 to 2006 school years. Harassment and extortion accounted for between 7% and 9% of all suspensions and expulsions in school districts other than the ASD from the 2005 to 2009 school years. All together, alcohol consumption, drug use and tobacco use were the reason for 6% of suspensions and expulsions in districts other than the ASD in each of the 2008 to 2009 and 2007 to 2008 school years, and 7% of suspensions and expulsions in each of the 2006 to 2007 and 2005 to 2006 school years.

Table 20. Reason for Suspension or Expulsion in Alaska and the Municipality of Anchorage by School Year, 2005 to 2009

Column percents

	2005 to 2006		2006 to 2007		2007 to 2008		2008 to 2009	
	N	%	N	%	N	%	N	%
Alaska								
Alcohol	281	1.1 %	300	1.2 %	228	1.0 %	187	0.7 %
Drug use	760	3.0	680	2.8	627	2.6	609	2.3
Fight/assault	4,069	15.9	3,872	16.0	3,231	13.6	3,184	12.3
Inapp. behavior	10,084	39.3	10,094	41.6	9,673	40.8	11,647	44.8
Truancy	4	0.0	0	0.0	0	0.0	743	2.9
Arson/vandal	352	1.4	346	1.4	429	1.8	337	1.3
Harass./extort.	1,944	7.6	2,115	8.7	1,980	8.4	1,983	7.6
Tobacco	744	2.9	717	3.0	623	2.6	683	2.6
Theft	545	2.1	556	2.3	473	2.0	477	1.8
Other	6,844	26.7	5,590	23.0	6,441	27.2	6,124	23.6
Total	25,627		24,270		23,705		25,974	
Anchorage								
Alcohol	98	1.0 %	107	1.0 %	83	0.9 %	63	0.7 %
Drug use	284	2.8	310	3.0	236	2.5	312	3.3
Fight/assault	1,565	15.3	1,362	13.3	1,180	12.4	1,191	12.7
Inapp. behavior	3,241	31.7	3,201	31.2	2,859	30.0	4,100	43.9
Truancy	4	0.0	0	0.0	0	0.0	0	0.0
Arson/vandal	106	1.0	123	1.2	148	1.6	69	0.7
Harass./extort.	888	8.7	833	8.1	749	7.9	497	5.3
Tobacco	104	1.0	102	1.0	73	0.8	79	0.8
Theft	243	2.4	233	2.3	192	2.0	181	1.9
Other	3,707	36.2	3,998	38.9	4,015	42.1	2,856	30.6
Total	10,240		10,269		9,535		9,348	

Source of data: Alaska Department of Education and Early Development, 2010

Of the 963 suspensions and expulsions relating to substance use that involved White youth from 2005 to 2009, 59% were for drug use, 22% for alcohol consumption, and 19% for tobacco use. Among suspensions and expulsions relating to substance use that were given to Black youth from 2005 to 2009, 84% related to drug use, 9% to alcohol consumption, and 7% to tobacco use. A total of 144 suspensions and expulsion for substance use involved Black youth from 2005 to 2009. Hispanic youth were given 116 suspensions or expulsions for substance use from 2005 to 2009, 70% of which related to drug use, 20% to alcohol consumption, and 10% to tobacco use.

Within the 344 suspensions and expulsions for substance use from 2005 to 2009 that involved Native Alaskan or American Indian youth, 58% related to drug use, 26% to tobacco use, and 16% to alcohol consumption. Asian youth received 73 suspensions and expulsions for substance use from 2005 to 2009, 66% of which related to drug use, 21% to alcohol consumption, and 14% to tobacco use. Thirty-eight suspensions and expulsions were given to Native Hawaiian/Pacific Islander youth for substance use from 2005 to 2009. Of these, 47% were for drug use, 45% for tobacco use, and 8% for alcohol consumption. Multi-race youth received 173 suspensions and expulsions for substance use from 2005 to 2009, 62% for drug use, 20% for tobacco use, and 19% for alcohol consumption (Table 21).

Table 21. Substance Use Suspension and Expulsions in Municipality of Anchorage by Race, 2005 to 2009

Row percents

Student Race	Alcohol		Drug Use		Tobacco		Total
	N	%	N	%	N	%	
White	210	21.8 %	568	59.0 %	185	19.2 %	963
Black	13	9.0	121	84.0	10	6.9	144
Hispanic	23	19.8	81	69.8	12	10.3	116
Asian	15	20.5	48	65.8	10	13.7	73
Alaska Native/ American Indian	55	16.0	199	57.8	90	26.2	344
Native Hawaiian/ Pacific Islander	3	7.9	18	47.4	17	44.7	38
Multi-Race	32	18.5	107	61.8	34	19.7	173
Total	351		1,142		358		1,851

Source of data: Alaska Department of Education and Early Development, 2010

In the first two quarters of 2009, 164 youth in traditional ASD high schools opted to participate in the Prime for Life Program, as did eight alternative school youth and 13 middle school youth. Prime for Life is an educational program is an evidence-based educational program “designed to gently but powerfully challenge common beliefs and attitudes that directly contribute to high-risk alcohol and drug use” (Prime for Life, 2010). ASD uses Prime for Life as a voluntary “intervention program for first time alcohol/drug abuse offenders” (Anchorage School District, 2010). Among those who opted into the program in the first two quarters of

2009, 67% were there for marijuana, 18% were there for alcohol consumption, and 14% for using prescription drugs. During the first two quarters of 2010, 159 youth participated in Prime for life. Of these youth, 137 were from traditional high schools, three were from alternative high schools, and 19 were from middle schools. Sixty-seven percent of the youth who opted into the Prime for Life program in the first two quarters of 2010 were there for marijuana, 16% for alcohol consumption, 13% for the use of prescription drugs, 2% for drug paraphernalia, and 1% each for cocaine use and other reasons not listed. In the third quarter of 2010, 36 youth from traditional high schools, one from alternative school, and seven from middle schools chose to participate in the Prime for Life program, for a total of 44 youth. Among those 44 youth, 77% had been involved with marijuana, 14% with alcohol consumption, 5% with prescription drug use, and 2% each with drug paraphernalia and other reasons not listed (Table 22).

Table 22. Anchorage School District Prime for Life Participants by Type of School and Substance Used, 2009 to 2010

Column percents

	First two quarters 2009		First two quarters 2010		Third quarter 2010	
	N	%	N	%	N	%
Type of School						
High schools	164	88.6 %	137	86.2 %	36	81.8 %
Alternative schools	8	4.3	3	1.9	1	2.3
Middle schools	13	7.0	19	11.9	7	15.9
Total	185		159		44	
Substance Used						
Marijuana	124	67.0 %	107	67.3 %	34	77.3 %
Alcohol	34	18.4	26	16.4	6	13.6
Rx	26	14.1	20	12.6	2	4.5
Cocaine	1	0.5	1	0.6	0	0.0
Paraphernalia	0	0.0	3	1.9	1	2.3
Other	0	0.0	2	1.3	1	2.3
Total	185		159		44	

Source of data: *Safe and Drug Free Schools, 2010*

Risky Behavior and Underage Drinking

Among youth in ASD traditional schools, 25% were a passenger with a drinking driver, 14% consumed alcohol before the last time they had sexual intercourse, and 9% drove after drinking in 2009. Also in 2009, 35% of youth in alternative ASD schools reported being a passenger with a drinking driver, 31% consumed alcohol before the last time they had sexual intercourse, and 16% drove after drinking. Among McLaughlin school youth, 33% were a passenger with a drinking driver, and 19% drove after drinking (Table 23).

Table 23. ASD Youth Who Participated in Risk Behavior after Consuming Alcohol or Drugs by Type of School, 2009

	<u>Traditional</u>	<u>Alternative</u>	<u>McLaughlin</u>	<u>Alaska</u>
	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>
Intercourse after consuming	13.6 %	30.9 %	-- %	17.1 %
Drove after drinking	8.8	15.7	19.0	8.9
Passenger with drinking driver	24.6	34.6	33.4	21.3

Source of data: Kerosky and turner, 2010

Traditional school responses weighted by enrollments of sex within grade

In the 2009 ASD YRBS, 14% of female youth in ASD schools reported that they consumed alcohol before the last time they had sexual intercourse, compared to 12% in 1995. This percentage had increased to 25% in 2005 from 12% in 1995 then dropped to 15% in 2007. In 2009, the percentage of female ASD youth who reported consuming alcohol before their last sexual intercourse was about equal to the Alaska average for female youth (15%), and is slightly lower than the U.S. average for female youth (17%).

In 2009, 13% of male youth in ASD schools reported consuming alcohol before their last sexual intercourse, versus 32% in 2005, and 30% in 2007. It appears that a lower percentage of male youth in ASD schools (13%) reported consuming alcohol before the last time they had sexual intercourse in 2009 than did the Alaska average of 19% for male youth in 2009, and the 2009 U.S. average of 26%. While the U.S. average for males and females differed by 9% in 2009, the Alaska averages differed by 4%, and the ASD averages by 1%. The percentage of females in the ASD reporting they consumed alcohol before the last time they had sexual intercourse appears to be slightly higher than males in the ASD in 2009, whereas the percentages for males in Alaska and the U.S. overall were higher than those of females (Table 24).

Table 24. ASD Youth Who Consumed Alcohol or Used Drugs before Last Sexual Intercourse, 1995 to 2009

	<u>ASD 1995</u>	<u>ASD 2005</u>	<u>ASD 2007</u>	<u>ASD 2009</u>	<u>Alaska</u>	<u>U.S. 2009</u>
	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>
Female youth						
Consumed before intercourse	11.6 %	24.9 %	14.8 %	14.1 %	15.2 %	17.1 %
Male youth						
Consumed before intercourse	13.1 %	31.5 %	29.8 %	13.1 %	18.6 %	25.9 %

Sources of data: Kerosky and turner, 2010; and Centers for Disease Control, 2010

Traditional school responses weighted by enrollments of sex within grade

Underage Drinking and Driving: Traffic Tickets, Crashes, Injuries and Fatalities

The percentage of female youth in ASD schools who drove after drinking was 8% in 1995 and 7% in 2009. The Alaska average for female youth who drove after drinking was 7% in 2009, and the U.S. average was 8%. Female youth appear to be more likely to be a passenger with a drinking driver than they are to drive after drinking themselves. In 1995, 33% of ASD female youth reported being a passenger with a drinking driver, compared to 27% in 2009. The 2009 average for female youth in Alaska who reported being a passenger with a drinking driver was 23%, and the U.S. average was 29%. In 2009 a slightly larger percentage of females reported being a passenger with a drinking driver in ASD schools relative to the average for Alaska, but this percentage was slightly lower than the U.S. average.

Among male youth in ASD schools, 17% reported driving after drinking in 1995, compared to 10% in 2009. The average for Alaska males reporting driving after drinking was 11% in 2009 and the U.S. male average was 12%. As with female youth, a higher percentage of males reported being a passenger with a drinking driver than driving after drinking themselves. In 1995, 28% of ASD male youth reported being a passenger with a drinking driver, compared to 23% in 2009. In 2009, the average for Alaskan male youth who reported being a passenger with a drinking driver was 20%, and the U.S. average was 28% (Table 25). Similar to females, males in ASD schools reported being a passenger with a drinking driver at a higher rate in ASD schools relative to the average for Alaska, but this was lower than the U.S. average.

Table 25. ASD Youth Who Drove after Drinking or Who Drove with a Drinking Driver in the Past 30 Days, 1995 to 2009

	ASD 1995	ASD 2005	ASD 2007	ASD 2009	Alaska	U.S. 2009
	%	%	%	%	%	%
Female youth						
Drove after drinking	7.6 %	10.4 %	9.2 %	7.2 %	6.9 %	7.6 %
Passenger with drinking driver	32.8	31.4	28.7	26.8	22.7	28.8
Male youth						
Drove after drinking	16.5 %	11.9 %	13.6 %	10.4 %	10.7 %	11.6 %
Passenger with drinking driver	27.9	25.5	26.7	22.6	19.7	27.8

Sources of data: Kerosky and turner, 2010; and Centers for Disease Control, 2010

Traditional school responses weighted by enrollments of sex within grade

There were 334 tickets given to youth ages 15 or younger who were driving vehicles that were involved in crashes in Anchorage from 2000 to 2008 (results not shown). A total of 10,011 tickets were given to youth ages 16 to 20 who drove vehicles that were involved in crashes in Anchorage from 2000 to 2009 (results not shown). Twelve percent of all alcohol-related driving while intoxicated tickets (DWI) given to drivers involved in crashes in Anchorage from 2000 to

2008 were given to youth who were 20 years old or younger. Seventeen percent of all tickets for having open alcohol in the vehicle while driving that were given to drivers involved in car crashes in Anchorage from 2000 to 2008 were given to youth ages 16 to 20 years.

In all other Alaska areas combined, youth ages 15 and younger who were driving vehicles that were involved in crashes from 2000 to 2008 were given 326 tickets, and youth ages 16 to 20 were given 6,150 tickets (results not shown). Of all alcohol-related DWI tickets that were given to drivers involved in crashes in other areas of Alaska, 17% were for youth ages 16 to 20, and 1% were for youth ages 15 or younger. Six percent of the tickets for refusing a breathalyzer test that were given to drivers involved in crashes in other areas of Alaska from 2000 to 2008, were to youth ages 16 to 20 (Table 26).

Table 26. Tickets Issued to Alaskans Who Were in Traffic Crashes by Age and Location, 2000 to 2008

Row Percents

		15 or Younger		16 to 20		21 to 29		30 or Older		Total
		N	%	N	%	N	%	N	%	
Anchorage										
	Alcohol DWI	5	0.3 %	231	12.0 %	696	36.1 %	996	51.7 %	1,928
	Intoxicated	0	0.0	0	0.0	2	8.3	22	91.7	24
	Refuse chemical test	0	0.0	0	0.0	5	55.6	4	44.4	9
	Refuse breathalyser test	0	0.0	1	7.1	7	50.0	6	42.9	14
	Snow machine intoxicated	0	0.0	0	0.0	2	100.0	0	0.0	2
	Open alcohol	0	0.0	1	16.7	2	33.3	3	50.0	6
	Other	329	0.8	9,778	24.1	9,980	24.6	20,457	50.5	40,544
Alaska (excluding Anchorage)										
	Alcohol DWI	10	0.6	263	16.7	465	29.6	835	53.1	1,573
	Intoxicated	0	0.0	1	20.0	2	40.0	2	40.0	5
	Refuse chemical test	0	0.0	1	6.3	3	18.8	12	75.0	16
	Refuse breathalyser test	0	0.0	6	17.6	4	11.8	24	70.6	34
	Snow machine intoxicated	0	0.0	0	0.0	1	100.0	0	0.0	1
	Open alcohol	0	0.0	0	0.0	10	45.5	12	54.5	22
	Other	316	1.7	5,879	31.3	4,120	21.9	8,470	45.1	18,785

Source of data: Alaska Department of Transportation and Public Facilities, 2010

Male youth ages 20 and younger in Anchorage who were involved in crashes were issued 5,998 tickets from 2000 to 2008. Of these tickets, 3% were alcohol-related DWI tickets, and 98% were other tickets. Female youth in Anchorage who were involved in crashes were issued 4,355 tickets from 2000 to 2008. Ninety-eight percent of these were other tickets and 2% were alcohol-related DWI tickets (Table 27).

Table 27. Tickets Issued to Anchorage Youth Ages 20 and Younger Who Were in Crashes by Sex, 2000 to 2008

Column Percents

Ticket	Male		Female	
	N	%	N	%
Alcohol DWI	147	2.5 %	87	2.0 %
Refuse breathalyser test	1	0.0	0	0.0
Open alcohol	1	0.0	0	0.0
Other	5,849	97.5	4,268	98.0
Total	5,998		4,355	

Source of data: Alaska Department of Transportation and Public Facilities, 2010

From 2000 to 2008, Anchorage youth ages 20 and younger who were drivers of the principle vehicles involved in crashes in which they were issued alcohol-related DWI tickets, caused a total of 152 injuries (Table 28). Of these injuries, 95% were minor injuries and 5% were major injuries. There were no fatalities caused in accidents in which Anchorage youth ages 20 and younger were the drivers of the principle vehicle and had been issued an alcohol-related DWI ticket (results not shown).

Table 28. Injuries Caused by Anchorage Youth Ages 20 and Younger Who Were Responsible for Crashes and Were Issued Alcohol-Related DWI Tickets, 2000 to 2008

Column Percents

Injuries	Under Age Youth Alcohol DWI	
	N	%
Minor injuries	144	94.7 %
Major injuries	8	5.3
Total injuries	152	

Source of data: Alaska Department of Transportation and Public Facilities, 2010

According to the Fatality Analysis Reporting System (FARS), there were two fatal accidents in 2005 that involved a driver aged 16 to 20 years (FARS does not indicate whether the drivers were in the primary vehicles or another vehicle involved in the crash, although Alaska Department of Transportation and Public Facilities data does). These two fatal crashes represent 8% of all fatal crashes involving drinking drivers in Alaska in 2005 (Table 29).

Table 29. Fatal Accidents Involving Drivers with Blood Alcohol Content of .08g/dl or Greater by Age, 2005

Row percents

Location	16 to 20		21 to 34		35 and Older		Total
	N	%	N	%	N	%	
Alaska	2	8.0 %	13	52.0 %	10	40.0 %	25
National	1,198	10.2	5,248	44.7	5,282	45.0	11,728

Source of data: National Highway Traffic Safety Administration, 2005

Legal Consequences of Underage Drinking

From 2000 to 2008 there were 30,998 alcohol-related charges given to youth ages 20 and younger in Alaska. Of these charges, 93% were minor consuming charges. Four percent of the alcohol-related charges given to Alaska youth from 2000 to 2008 were for operating a vehicle after consuming alcohol. Minors being on a licensed premise and minors on a licensed premise with a fake ID each made up 1% of the charges given to underage youth in Alaska from 2000 to 2008 (Table 30).

Table 30. Total Number of Charges among Alaska Youth Age 20 and Younger, 2000 to 2008

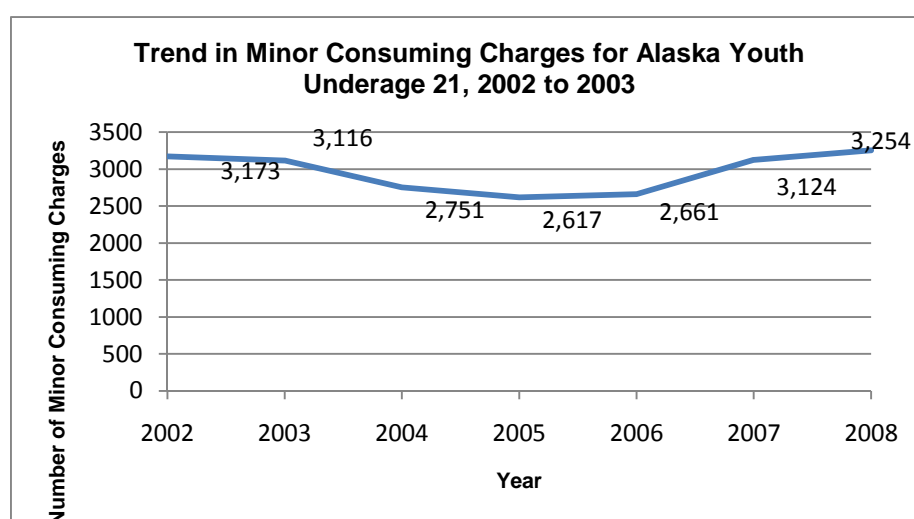
Column percents

Charge	Underage Youth	
	N	%
Minor consuming	28,747	92.7 %
Operating vehicle within 24 hours	13	0.0
Fake ID on licensed premise	432	1.4
Minor on licensed premise	333	1.1
Minor consuming operating vehicle	1,199	3.9
Minor alcohol violation	267	0.9
Minor in possession	7	0.0
Total	30,998	

Source of data: Alaska Justice Statistical Analysis Center, 2010

In 2002, there were 3,173 minor consuming charges filed against Alaska youth under age 21. The number of minor consuming charges was 3,116 in 2003, 2,751 in 2004, and 2,617 in 2005. In 2006 and 2007, minor consuming charges for underage Alaskan youth totaled 2,661 and 3,124, respectively. There were 3,254 minor consuming charges filed for Alaska youth under the age of 21 in 2008 (Figure 3).

Figure 3. Trend in the Total Number of Minor Consuming Charges among Underage Youth in Alaska, 2002 to 2008

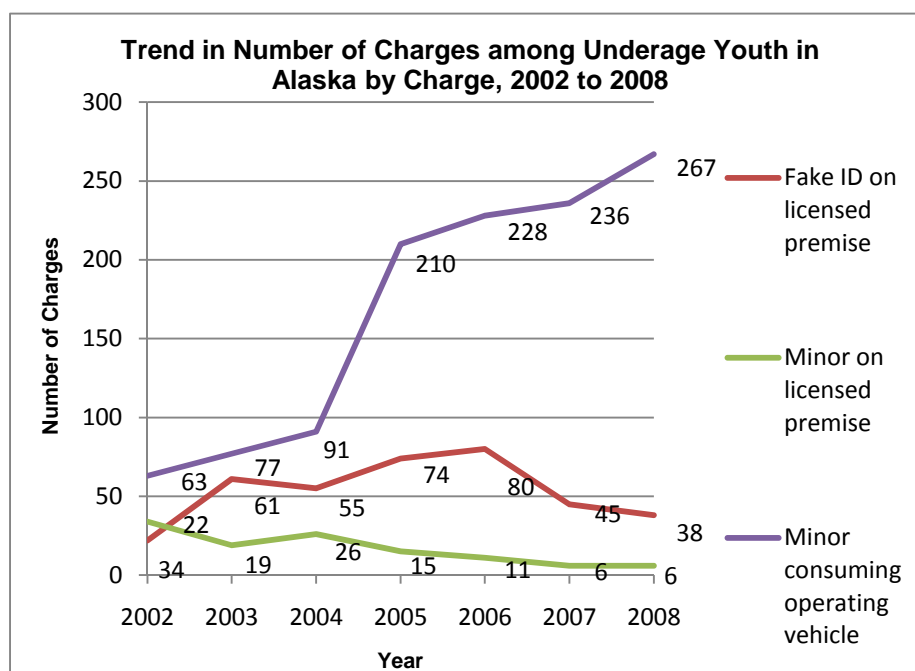


Source of data: Alaska Justice Statistical Analysis Center, 2010

In 2002, there were 63 charges for minors operating a vehicle after consuming alcohol. The number of charges for minors operating vehicles after consuming was 77 in 2003, and 91 in 2004. There were 210 charges for youth operating vehicles after consuming in 2005 in Alaska, 228 in 2006, and 236 in 2007. In 2008, 267 charges were filed for youth operating vehicles after consuming alcohol.

There were 22 charges for minors being on licensed premises and 34 charges for minors being on licensed premises with a fake ID in 2002. The total number of minors on licensed premises charges including 19 charges of minors on licensed premises and 61 charges of minors on licensed premises with a fake ID was 80 in 2003, 81 in 2004, 89 in 2005, and 91 in 2006. In 2007 and 2008, respectively, there were 51 and 44 charges in among underage Alaska youth for minors being on a licensed premise, and minors being on a licensed premise with a fake ID (Figure 4).

Figure 4. Trend in the Total Number of Charges among Underage Youth in Alaska by Selected Charge, 2002 to 2008



Source of data: Alaska Justice Statistical Analysis Center, 2010

Alcohol Abuse Requiring Treatment

In Alaska in 2007, there were a total of 1,691 alcohol abuse treatment admissions for the overall population. Eighty-eight percent of these admissions were for persons ages 21 and older, 6% were for persons ages 18 to 20 years, and 5% were for persons ages 12 to 17 years. In 2008, persons ages 12 to 17 years were 3% of all admissions for treatment for alcohol abuse in Alaska, and those ages 18 to 20 years were 5% of all admissions. Persons ages 21 and older were 91% of the 2,164 admissions to treatment for alcohol abuse in Alaska in 2008. In 2009, there were 2,335 admissions for treatment for alcohol abuse in Alaska. Ninety-two percent of all alcohol abuse treatment admissions were for persons ages 21 and older, 5% were for persons ages 18 to 20 years, and 4% were for those ages 12 to 17 years.

There were 1,064 admissions to treatment for alcohol abuse with a secondary substance in Alaska in 2007. Less than 1% of these admissions were people ages 0 to 11 years, 11% were those ages 12 to 17 years, and 8% were those ages 18 to 20 years. People ages 21 and older were 81% of all admissions to treatment for alcohol abuse with a secondary substance in Alaska in 2007. In 2008, of the 1,857 admissions to treatment for alcohol abuse with a secondary

substance, less than 1% were in the age group 0 to 11 years, 7% were ages 12 to 17 years, and 9% were those ages 18 to 20 years. The 21 and older age group were 84% of all admissions to treatment for alcohol abuse with a secondary substance in Alaska in 2008. Six percent of the 1,735 admissions to treatment for alcohol abuse with a secondary substance in Alaska in 2009 were for youth ages 12 to 17 years. Nine percent of these admissions were for individuals between the ages of 18 and 20 years. Alaskans ages 21 and older were 86% of all admissions to treatment for alcohol abuse with a secondary substance in the state in 2009 (Table 31).

Table 31. Alcohol Abuse Treatment Admissions in Alaska by Age Group, 2007 to 2009

Column percents

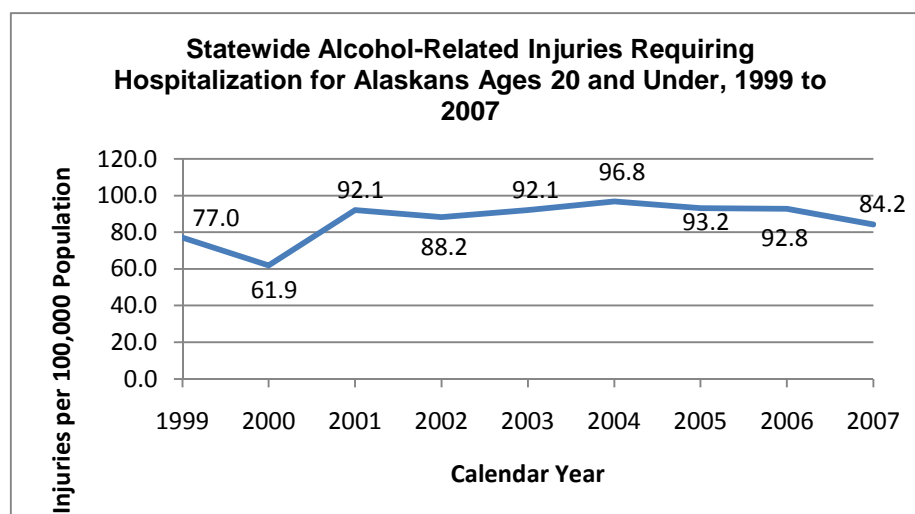
	2007		2008		2009	
	N	%	N	%	N	%
Alcohol only						
0 to 11 years	0	0.0 %	0	0.0 %	0	0.0 %
12 to 17 years	90	5.3	74	3.4	86	3.7
18 to 20 years	108	6.4	117	5.4	105	4.5
21 and older	1,493	88.3	1,973	91.2	2,144	91.8
Total	1,691		2,164		2,335	
Alcohol with secondary substance						
0 to 11 years	1	0.1 %	2	0.1 %	0	0.0 %
12 to 17 years	120	11.3	128	6.9	97	5.6
18 to 20 years	84	7.9	169	9.1	153	8.8
21 and older	859	80.7	1,558	83.9	1,485	85.6
Total	1,064		1,857		1,735	

Source of data: Substance Abuse and Mental Health Services Administration, 2010a,b,c

Health and Safety Consequences of Underage Drinking

Trend data from the Alaska Trauma Registry show that in 1999, the rate of alcohol-related injuries requiring hospitalization per 100,000 population among Alaskans ages 20 and under was 77. This rate reached a high of 97 in 2004, and was at 84/100,000 population in 2007 (Figure 5).

Figure 5. Statewide Alcohol-Related Injuries Requiring Hospitalization for Alaskans Ages 20 and Under, 1999 to 2007 (per 100,000 population)



Source of data: Moore, 2010a

In the Anchorage region, the number of alcohol-related injuries requiring hospitalization among Alaskans ages 20 and younger appears to show an overall decline from 54 injuries in 2001 to 31 injuries in 2007. For all of Alaska, excluding the Anchorage region, the number of alcohol-related injuries requiring hospitalization among youth age 20 and younger show an overall increase from 140 in 2001 to 152 in 2007, although the 2007 number is down from the 2006 high of 173 (Table 32).

Table 32. Number of Alcohol-Related Injuries Requiring Hospitalization for Alaskans Ages 20 and Under by Region of Residence, 2001 to 2007

Region	2001 N	2002 N	2003 N	2004 N	2005 N	2006 N	2007 N
Anchorage	54	40	33	34	35	28	31
Alaska	140	147	163	164	166	173	152
Total	194	187	196	198	201	201	183

Source of data: Moore, 2010b

Fetal Alcohol Spectrum Disorder (FASD) births may also be one of the unfortunate consequences of youth alcohol consumption. Among Alaska mothers with a maternal age of 15 to 19, years, there were 7,708 live births from 1996 to 2002, equaling 11% of all live births in Alaska in that period. This same maternal age group had 15% of all FASD births from 1996 to 2002. Eighty-nine percent of all live births in Alaska from 1996 to 2002 were to mothers of maternal ages 20 to 45 years, and this same group had 86% of all FASD births from 1996 to 2002 (Table 33). Alaska mothers with a maternal age of 15 to 19 had FASD births at a higher rate than their representation among all live births.

Table 33. Total Number of Fetal Alcohol Spectrum Disorder Births in Alaska by Maternal Age, 1996-2002

Row percents

	Maternal Age				Total
	15 to 19 years		20 to 45 years		
	N	%	N	%	
FASD Births	138	14.5 %	817	85.5 %	955
Total live births	7,708	11.1	61,944	88.9	69,652

Source of data: Schoellhorn, and Beery, 2006

Between 2001 and 2005, there were 5,954 deaths in Anchorage, 3% of which were alcohol-induced. Of all deaths in Alaska, excluding Anchorage, 4% were alcohol induced (Table 34).

Table 34. Total Number of Alcohol-Induced Deaths for All Ages in Anchorage, 2001 to 2005

Column percents

Death	Anchorage		All other areas		Alaska total	
	N	%	N	%	N	%
Alcohol-induced	205	3.4 %	381	4.0 %	586	3.8 %
All other deaths	5,749	96.6	9,074	96.0	14,823	96.2
Total	5,954		9,455		15,409	

Source of data: Hull-Jillyand Casto, 2009

In Alaska from 2001 to 2005, there were 20 alcohol-induced deaths among male and female youth ages 0 to 24 years. Eleven of the alcohol-induced deaths among youth ages 0 to 24 years involved Native males, five involved White males, three involved Alaska Native females, and one involved a Black female. Among male and female adults ages 25 and older, there were 564 alcohol-induced deaths from 2001 to 2005. Two-hundred-eleven of these deaths involved White males, 149 involved Alaska Native males, and 121 involved Native females. There were

76 alcohol-induced deaths among White females ages 25 and older from 2001 to 2005, five for Black males, and one each for Asian males and Asian females (Table 35).

Table 35. Total Number of Alcohol-Induced Deaths in Alaska by Age, Race and Sex, 2001 to 2005

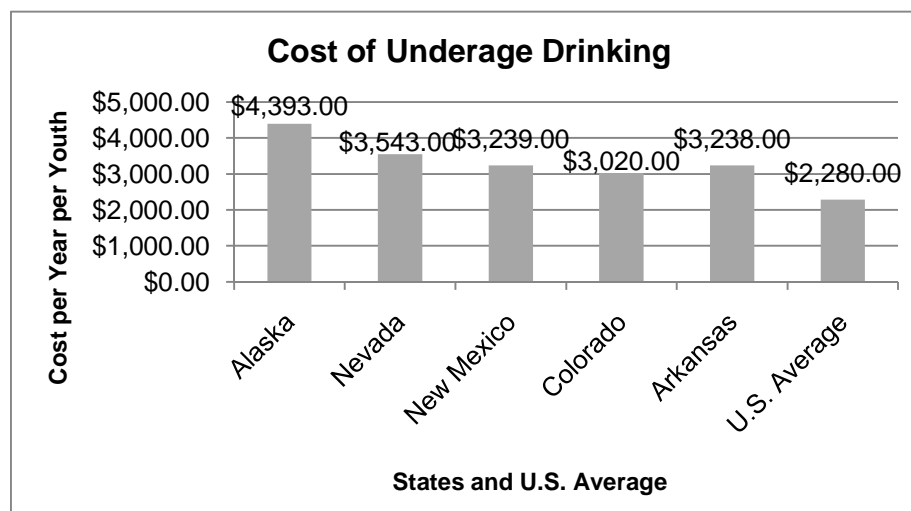
		<i>Row totals</i>		
		Alcohol Induced Death Rate		
		Ages	Ages 25	
		0 to 24	and Older	Total
Female				
	Native	3.0	121.0	124.0
	White	0.0	76.0	76.0
	Black	1.0	0.0	1.0
	Asian	0.0	1.0	1.0
Male				
	Native	11.0	149.0	160.0
	White	5.0	211.0	216.0
	Black	0.0	5.0	5.0
	Asian	0.0	1.0	1.0
	Total	20.0	564.0	584.0

Source of data: Hull-Jilly and Casto, 2009

Economic Consequences of Underage Drinking

In 2007, the average cost of underage drinking per youth in the U.S. was \$2,280.00. Alaska was among the five states with the highest cost of underage drinking per youth in 2007, with a cost per youth of \$4,393.00. Among the remaining four States, Nevada reached \$3,543.00 per youth, New Mexico's cost was \$3,239.00, Arkansas' cost was \$3,238.00, and the cost in Colorado was \$3,020.00 (Figure 6).

Figure 6. Total Cost of Underage Drinking per Year, per Youth, in the Five States with the Highest Cost-per-Youth, 2007



In 2007, the total cost of underage drinking was \$68 billion, \$46 billion of this went to pain and suffering, \$15 billion went to work lost costs, and \$7 billion to medical costs. In Alaska in 2007, \$221 million was spent on pain and suffering related to underage drinking. The total direct costs of underage drinking in Alaska in 2007 were \$98 million, \$44 million of which went to medical costs and \$54 million to work lost costs. In total, underage drinking cost Alaska \$319 million in 2007 (Table 36).

Table 36. Total Cost of Underage Drinking in the Five States with the Highest Cost-Per-Youth, 2007 (in Millions of Dollars)

Column totals

	Alaska	Nevada	New Mexico	Colorado	Arkansas	U.S. Total*
Direct Cost						
Medical Costs	44	76	70	245	87	7
Work Lost Costs	54	185	139	226	195	15
Total Direct Costs	98	261	209	471	282	22
Indirect Cost						
Pain and Suffering	221	533	449	885	602	46
Total	319	794	658	1356	884	68

Source of data: Underage Drinking Enforcement Training Center, 2009

*In billions of dollars

There are various problems caused by underage drinking that contributed to the \$68 billion spent in the U.S. on underage drinking in 2007. For example, the Pacific Institute for Research and Evaluation (PIRE) estimates that youth violence as a result of underage drinking

cost the U.S. over \$43 billion in 2007. An additional \$10 billion was spent on youth traffic crashes, nearly \$5 billion on high risk sex among those ages 14 to 20 years, and \$3 billion on youth property crime, as a result of underage drinking. In Alaska alone, \$217 million was spent on youth violence that resulted from underage drinking, over \$40 million on youth traffic crashes, and \$17 million on youth alcohol treatment. Underage drinking also cost Alaska nearly \$16 million for consequences associated with high risk sex among youth ages 14 to 20 years, and the same amount for injuries that happened to underage youth who were drinking alcohol. Costs associated with youth property crime resulting from underage drinking in Alaska totaled almost \$8 million in 2007 (Table 37).

Table 37. Cost of Underage Drinking in the Five States with the Highest Cost-per-Youth by Problem, 2007 (in Millions of Dollars)

Column totals

Problem	Alaska	Nevada	New Mexico	Colorado	Arkansas	U.S. Total*
Youth violence	217.4	514.5	426.2	830.5	547.1	43,835.8
Youth traffic crashes	40.6	131.3	87.1	152.1	185.5	10,019.3
High risk sex- ages 14 to 20	15.9	50.4	68.7	106.2	56.7	4,871.3
Youth property crime	7.9	36.3	26.2	47.5	34.5	3,178.8
Youth injury	15.6	27.2	18.6	39.6	29.7	2,064.5
Poisonings and psychosis	1.2	3.2	3.7	8.5	3.1	416.2
FAS among mothers ages 15 to 20	4.3	14.0	17.3	22.9	14.5	1,227.3
Youth alcohol treatment	17.3	17.3	10.1	148.3	12.9	2,400.3
Total	320.2	794.2	657.9	1,355.6	884.0	68,013.5

Source of data: Underage Drinking Enforcement Training Center, 2009

*In billions of dollars

Data Gap Analysis

Following the recommendation of the RAND Corporation in its Preventing Underage Drinking Report (2007), we identified currently available indicators of underage drinking and recommend collection of additional data. Based on the known indicators that were collected for this report, it seems that little is known about youth access to alcohol in Anchorage, and Alaska generally. The information we do know about youth access to alcohol comes from an item on the YRBS that asks youth how they normally get their alcohol, and from one indicator from the Alaska Alcoholic Beverage Control (ABC) Board regarding the percentage of licensees who pass their compliance checks. Information that is lacking in regard to youth access to alcohol, based on the indicators reported in this assessment, include statistics on shoulder tap activities carried out by the Alaska ABC Board. Shoulder tap activities involve law enforcement using youth under 21 to ask adults outside of liquor stores to purchase alcohol for them. Alcohol Beverage Control enforcement collects this data and may be willing to make it available for independent analysis. Some additional indicators that could add to the body of knowledge about youth access to alcohol in Anchorage include the number and percentage of youth who report being permitted by their parents to consume and/or accessing alcohol from parents or other family members, and the number and percentage of parents and other family members who report permitting youth to consume alcohol. Another important indicator for youth access to alcohol is adults' (both near peers aged 21 to 25 and older adults) attitudes and behaviors toward purchasing or providing alcohol for youth.

A number of the indicators presented in this report about social norms and youth perceptions of alcohol consumption were available at the state or national levels, but not for Anchorage specifically. It may be useful for future research efforts to focus on such indicators among youth in Anchorage and other parts of Alaska. For example, the Monitoring the Future survey does not include youth from Alaska in their sample population, but survey items, such as youth approval of alcohol consumption by others, could add to our knowledge of youth perceptions if they were asked of youth in Anchorage and other parts of Alaska.

A number of indicators about alcohol consumption among Anchorage youth were available regarding the amount of consumption and age of first consumption. Additional indicators meriting further research in this area include the circumstances or environments in which youth normally consume alcohol (at parties, in small groups, alone, for example).

The majority of indicators collected for this report related to the consequences of youth alcohol consumption. Much of this information was also available for Anchorage specifically, and for Alaska. However, one potential indicator that was not included in this report is the number and/or rate of alcohol-related emergency room visits for youth in Anchorage versus other areas of the state.

A number of environmental indicators were not, to our knowledge, available at the time of this report, but could add significantly to our knowledge of youth alcohol access and consumption in Anchorage and improve the ability to form programs and policies to address

related issues. Such indicators include the perceptions and attitudes of law enforcement, prosecutors, and judges toward youth alcohol access and consumption; the size and type of the problem in Anchorage; and beliefs among criminal justice professionals, parents and others about how these issues are handled within the criminal justice system. In addition, a review of local laws, policies, and practices related to alcohol consumption and underage drinking could be compiled. A map identifying the location of licensed liquor establishments as well as violators and repeat violators of compliance checks could also be generated. Other reports have suggested that it may be useful to examine the amount of alcohol advertisements or number of licensed alcohol establishments that youth are exposed to on a regular basis, and comparatively, the amount of anti-alcohol or positive alternatives to alcohol that youth are exposed to regularly. Another valuable contribution would be to examine the number of alcohol-related charges that are filed against both youth and against licensed establishments and their employees, the number of these cases that are prosecuted in court, and the number of resulting convictions. Additional environmental indicators that could be examined in future research include the number and percentage of parents that consume alcohol around their children, and the amount of alcohol these parents consume (as reported by youth and/or parents), as well as the number and percentage of friends youth report being in contact with on a regular basis who consume alcohol.

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Substance Abuse and Mental Health Service Administration, Office of Applied Studies (December 30, 2008a). Table C4. Alcohol use in past month, binge alcohol use in past month, and perceptions of great risk of having five or more drinks of an alcoholic beverage once or twice a week among persons aged 12 or older, by substate region: Percentages, annual averages based on 2002, 2003, and 2004 NSDUHs. *State treatment planning areas: Alcohol, binge drinking and perceived alcohol risks*. Retrieved from <http://oas.samhsa.gov/subState2k6/alc.htm>

Substance Abuse and Mental Health Service Administration, Office of Applied Studies (December 30, 2008b). Table C5. Alcohol Use in Past Month and Binge Alcohol Use in Past Month among Persons Aged 12 to 20, by Substate Region: Percentages, Annual Averages Based on 2002, 2003, and 2004 NSDUHs. *2002-2004 State treatment planning areas: Underage drinking data*. Retrieved from <http://oas.samhsa.gov/subState2k6/underage.htm>

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Appendix - Annotated Bibliography of Survey Sources

Anchorage School District Youth Risk Behavior Survey (YRBS). Available at <http://www.asdk12.org/depts/sdfs/research.asp>

The Anchorage School District (ASD) YRBS is a report that uses data collected from the Alaska YRBS to compare the ASD to the statewide average. The ASD report further analyses the trends occurring in ASD traditional schools and compares ASD traditional schools with the district's alternative and McLaughlin schools. The ASD YRBS has a minimum response rate of 60% required for generalization to the student population.

Centers for Disease Control and Prevention. *Youth Risk Behavior Surveillance System*. Available at <http://www.cdc.gov/HealthyYouth/yrbs/index.htm>

The Youth Risk Behavior Surveillance System (YRBSS) reports on national, state, territorial, tribal and district school-based surveys that monitor priority health-risk behaviors among youth in the United States. Alcohol use is a component of the YRBSS surveys.

YRBSS surveys are conducted every two years from February to May. The national sample is separate from those of state, territorial, tribal, and district surveys, and is a three-stage cluster design that is representative of United States youth in grade 9 through grade 12 in public and private schools. Therefore, state estimates cannot be derived from the national survey results. Estimates derived from the sample are accurate at a 95% confidence interval.

Data from the YRBS are limited by their being self-reported data for which any under or over reporting cannot be accurately known. Data also apply only to youth who are in school. Surveys across sites are inconsistent due to the need to adhere to local procedures for obtaining parental consent. However, as the national YRBS surveys are conducted in Alaska, it offers the State one of a few points of comparison to youth at the national level.

Institute for Social Research at the University of Michigan. *Monitoring the Future*. Available at <http://monitoringthefuture.org/>

Monitoring the Future (MTF) is an ongoing annual study that began in 1975 and is funded by the National Institute on Drug Abuse and conducted by the Institute for Social Research of the University of Michigan. The MTF addresses the behaviors, attitudes, and values of American youth in secondary school and college, and of young adults. The sample of secondary school youth consists of 50,000 students in grades 8, 10, and 12. Data are collected using a multi-stage random sampling design from approximately 420 public and private middle and high schools in the spring of each year. The MTF data collection process does not include youth in Alaska.

National Highway Traffic Safety Administration, National Center for Statistics and Analysis [*FARS Query System*]. Available at <http://www-fars.nhtsa.dot.gov/QueryTool/QuerySection/SelectYear.aspx>

The Fatal Accident Reporting System (FARS) is managed by the National Center for Statistics Analysis (NCSA) and records fatalities caused by traffic crashes and fatalities resulting from injuries sustained during traffic crashes and that occur within 30 days of the crash date. All fatal crashes in the 50 States, the District of Columbia, and Puerto Rico are contained in FARS. Custom queries can be performed online with the FARS Query System, including univariate analyses and cross tabulations. Subsets of data may also be downloaded.

Crashes in the FARS database occur on public traffic ways and all involve at least one death that occurred within 30 days of the crash date. FARS also provides access to files that contain driver BAC estimates through report numbers DOT HS 807 094 and DOT HS 807 095

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The Maternal and Child Health (MCH) Book is an annual publication by the MCH Epidemiology Unit that provides indicators of maternal and child health in Alaska. The 2005 edition includes the first comprehensive analysis of Alaska Birth Defects Registry (ABDR) data. The data for the report come from health care providers and medical records and may be affected by differences in diagnoses, record keeping and reporting. Information on risk factors was derived from cross-referencing the ABDR databases with birth certificates, which may or may not be an accurate reflection of the prevalence of all risk factors. Causal relationships may not necessarily be assumed as intervening variables may not have been measured or analyzed.

State of Alaska Health and Social Services, Division of Public Health Chronic Disease Prevention and Health Promotion. *Alaska Youth Risk Behavior Survey*. Available at <http://www.hss.state.ak.us/dph/chronic/school/YRBS.htm>

The Alaska Youth Risk Behavior Survey (YRBS) is part of the Centers for Disease Control and Prevention Youth Risk Behavior Surveillance System (YRBSS). The Alaska YRBS monitors youth risk behaviors that for the most prevalent health and social problems relating to adolescence, with the purpose of promoting planning and evaluation for prevention and intervention. The YRBS is an anonymous school-based survey of youth in The Alaska YRBS was administered in 1995, 1999, 2001, 2003, 2005, 2007 and 2009, with representative data collected in 1995, 2003, 2007 and 2009.

The 2009 Alaska YRBS included a sample of 1,373 students from 43 high schools that are representative of all public high schools in the State in grades 9 through 12. The 2009 survey also included 1,020 students from 15 alternative high schools in Alaska.

Substance Abuse and Mental Health Services Administration, Office of Applied Studies.
National Survey on Drug Use and Health.

Available at <http://www.oas.samhsa.gov/nsduh.htm>

The National Survey on Drug Use and Health (NSDUH) is funded by the Substance Abuse and Mental Health Services Administration and is currently administered by Research Triangle Institute. The NSDUH is a primary source of data about, among other data elements, national and state-level alcohol consumption in the United States. The NSDUH uses a sample of approximately 67,500 noninstitutionalized Americans ages 12 and older who are contacted for face-to-face interviews. Comparisons described in the report are statistically significant at the .05 level, unless otherwise stated. Due to methodological differences between survey years, NSDUH data from 2002 and later cannot be compared with those from 2001 and earlier to assess changes overtime.